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Corporate venture capital organizations in Germany: a comparison

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Corporate Venture Capital Organizations in Germany. A Comparison

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ABSTRACT

This paper analyzes the goals, the organizational structures and processes, and the investment criteria that underlie venture strategies in Germany today, using a sample of 20 corporate venture capital organizations (CVCs). The performance of these CVCs is examined and the data are compared with those generated by studies on German independent venture capital organizations (VCs) as well as with European and U.S. CVCs. The study concludes that German CVCs focusing either on financial or on strategic objectives are more successful than those with a mixed approach. Further, CVCs with a strong financial focus seem to be financially – and sometimes also strategically – more successful than CVCs with a strong strategic focus. Finally, based on these findings, theses concerning the CVC's organizational learning are developed.

ZUSAMMENFASSUNG

Anhand von 20 Corporate Venture Capital Gesellschaften (CVCs) in Deutschland analysieren die Autorinnen im vorliegenden Papier deren Ziele, Organisationsstrukturen und -prozesse sowie deren Investitionskriterien. Es wird zum einen der finanzielle und strategische Erfolg dieser CVCs untersucht, zum anderen werden die Ergebnisse mit Daten deutscher klassischer VCs sowie europäischer und U.S. CVCs verglichen. Die Kernaussage der Studie ist, dass deutsche CVCs, die sich entweder auf strategische oder auf finanzielle Ziele konzentrieren, erfolgreicher sind als solche, die beide Ziele gleichermaßen verfolgen. Desweiteren wird deutlich, dass die CVCs mit einem überwiegend finanziellen Ansatz finanziell – und zuweilen auch strategisch – erfolgreicher zu sein scheinen als CVCs mit einem überwiegend strategischen Investitionsfokus. Abschließend werden – auf diesen Ergebnissen basierend – Thesen zum organisationalen Lernverhalten der CVCs entwickelt.

Corporate Venture Capital Organizations in Germany
A Comparison

There is little recent empirical research on corporate venture capital organizations (CVCs) and most of the relevant literature focuses on the Anglo-American market. One reason for the dearth of empirical data on the German CVC market (Opitz 1990; Rauser 2002; Schween 1996; Witt and Brachtendorf 2002; Mackewicz & Partner 2003) is that CVCs are comparatively rare and young in Germany. Consequently, studies on German CVCs are based on an extremely small number of cases. The studies that do exist tend to portray the German market as less successful than more mature markets, such as those in the United States (Schween 1996). Another body of literature compares CVCs with independent venture capital organizations (VCs) (Gompers and Lerner 1998; Maula, Autio and Murray 2003 forthcoming; Siegel, Siegel and MacMillan 1988; Weber and Dierkes 2002). The differences between CVCs and classical VCs raise interesting research questions, especially when one investigates their strategic and financial success.

This study inquires into four aspects:

1. A comparison of newly gathered data on goals, decision-making processes, fund structure, and attainment of strategic and financial goals of 20 German CVCs with 52 German independent VCs as well as with other German, European and U.S. CVCs (to the extent comparable data are available).
2. An analysis of fundamental goals and their effect on the strategic and financial success of CVCs. The intention is to find out whether a prioritization of financial goals, a mixed approach pursuing both financial and strategic goals, or a distinctly strategic focus is the most promising approach for CVC programs.
3. An examination of organizational structures and processes and their effect on the strategic and financial success of CVCs. The intention is to identify the most promising structures and processes for CVCs in terms of their

level of dependence or independence. An investigation of the consistency between organizational structures & processes and their underlying fundamental goals. The intention is to identify such constellations of organizational goals and structures/processes, which positively influence a CVC's success and hence, should be aimed for.

The patterns that emerge from the new insights from our own data in conjunction with data on German VCs as well as European and US CVCs contribute significantly towards building a generally valid theory for CVC structures and strategies. The ultimate goal of this paper is to provide practical advice and clarity for a CVC as to which strategies to pursue and how to structure a CVC organization in order to increase the likelihood of success.

Past Research on Corporate Venture Capital

Interest in CVCs has fluctuated markedly in the past decades. Gompers and Lerner (1998) identified three major waves, the most recent of which began in the late 1990s. The abundance or lack of research on CVCs is a reflection of the economic importance of this sector over time.

A flurry of new studies has appeared during the last three years (Birkinshaw, van Basten Batenburg and Murray (2002); Chesbrough 2002, 2000; Gompers and Lerner 1998; Kann 2000; Keil 2000; Maula and Murray 2001a, 2001b; Maula, Autio and Murray 2003; Poser 2002; Rauser 2002; Thornhill and Amit 2001; Weber and Dierkes 2002; Weber and Weber 2002). The recent publications on which we focus permit a closer look at the performance of CVCs and the potential success factors, including the relationship between goals and organizational structures and processes.

Gompers and Lerner (1998), who analyzed over thirty thousand transactions by corporate and other venture organizations in the American market, found that corporate venture investments in entrepreneurial firms appear to be at least as successful as those backed by independent venture capital organizations. They suggest that, "the presence of a strong strategic focus is critical to the success of

CVCs. ... Corporate programs without a strong strategic focus appear to be much less stable, frequently ceasing operations after only a few investments, but strategically focused programs appear to be as stable as independent organizations." (Gompers and Lerner 1998, p. 34). The authors do not comment on the role of financial goals and success, making it difficult to compare their findings fully with the results of other research, including this study.

Siegel, Siegel and MacMillan (1988) investigated the independence, in terms of decision-making autonomy and fund structure, and the performance of CVCs. They distinguished between "pilots" and "copilots" within the CVC sample. Pilots are marked by substantial organizational independence and are keenly attuned to return on investment (ROI) and entrepreneurialism in their investment criteria. Copilots are highly dependent on corporate management with respect to venture funding and decision-making autonomy. They attach greater weight to strategic benefits for the corporation, which are more important than criteria relating to the entrepreneurial team and to financial performance, such as ROI. The study showed that CVCs tending to act like classical VCs (pilots) achieve higher ROI than copilots do and are just as strategically successful for the parent company. The authors of the study therefore concluded that an excessively strong insistence on the strategy criteria of the parent company could lead to serious problems with the pursuit of CVC activities (Siegel et al. 1988, p. 246).

The findings of these two major studies suggest that CVCs are caught in a contradiction, or are at least walking a tightrope. While one study recommends that CVCs take a strong strategic focus because it is critical to success (Gompers and Lerner (1998), the other study warns that an excessively strong strategic orientation harms both the strategic and economic success of the CVC program (Siegel et al.1988). The two studies were undertaken within a ten years time difference, so the market might have changed substantially during this period. Furthermore, the studies took different approaches – the former interviewed managers in VCs, the latter analyzed data on portfolio companies. Nevertheless, their results are sufficiently comparable and provide a good basis for further research. Hence, the goal of this contribution is to elucidate these seemingly contradictory assessments by examining the German market, and thereby to

contribute to developing a generalizable theory on the structure and strategy of CVS.

Chesbrough (2002) somewhat reconciles these two approaches by arguing for an investment strategy depending on the objective – strategic or financial – and the degree to which the operations of the investing company and the start-up are linked – closely or tightly. He differentiates between four investment approaches, which have to be aligned with the long-term business strategy of the corporation and its operational capabilities: (1) Driving Investments, which are characterized by a strategic rationale and tight links between start-up and the operations of the investing company, (2) Enabling Investments, which are primarily made for strategic reasons but do not couple the venture tightly with its own operations, (3) Emergent Investments, which are primarily financially driven, but might have a strategic potential for the parent company in the future, (4) Passive Investments, which provide financial return only (Chesbrough 2002, p. 6).

Turning to the German literature, the three known studies on corporate venture capital and their success in Germany, apart from our own (Weber and Dierkes 2002; Weber and Weber 2002), are by Schween (1996) and very recently by Witt and Brachtendorf (2002), and Mackewicz & Partner (2003). A limitation that all empirical studies in this field have to grapple with is the small number of CVCs in Germany. Schween (1996) investigated the goals, investment criteria, and organizational form of German CVCs in a small sample of only 12 cases. His main findings were that 10 of the 12 companies (83%) stressed strategic goals, with two companies (17%) stating that they pursued strategic and financial goals simultaneously. The dominance of the strategic goals was also reflected in the priority given to the investment criteria named. Financial criteria ranked fourth after three strategic ones. The strategic and financial success of these CVC programs was modest. Only two of the 12 CVCs (17%) that Schween studied were satisfied with their strategic goals, a figure corresponding to an arithmetic mean of 2.0. The financial goals scored virtually the same result – an arithmetic mean of 1.9 (Schween 1996, p. 247).

Witt and Brachtendorf (2002) tried to examine why so few companies have

succeeded so far in driving their growth agenda by a means of corporate venturing (Stringer 2000). On the basis of 21 personal interviews, they showed that a high number of German CVCs do not follow the recommendations for organizational structures and processes that have been generated by the international research on successfully operating CVC programs. Witt and Brachtendorf (2002) find that the CVCs in their sample are "much too dependent on the parent company" (p. 11), in terms of their fund structure as well as in terms of their decision making processes. Another key finding of the study is that the top managers of the CVCs have too little entrepreneurial experience and their remuneration packages are inappropriate in light of the risks involved and the market conditions. The authors conclude that there is a relatively low consistency between international recommendations and their implementation. They do not make any statement about the necessity of consistency between the CVCs' goals and structures and processes.

Mackewicz & Partner (2003) studied 31 CVCs and found that 15% of them pursue strategic goals exclusively and 33% have primarily strategic goals, making for a total of 48% that have a strong strategic focus. They found that 30% emphasize financial goals (of which 3% report that they pursue financial goals exclusively; and 27% indicate "primarily"). One fifth of the sample (21%) pursues both goals equally strongly. They point out – in line with Siegel et al. (1988) – that the ambition to pursue different, often conflicting goals with one and the same CVC unit bears substantial potential for conflict, inefficiencies and ultimately, failure to reach either strategic or financial goals. Mackewicz & Partner (2003) therefore recommend a focused strategy and structure for CVC organizations. They differentiate between six groups according to the CVCs' most important core goals ("Innovators", "Salespeople", "Observer", "Renewer", "Entrepreneurs", and "Investors"). These core goals differ especially with regard to (i) interaction with the corporate mother, (ii) maturity of the venture, (iii) investment horizon, and (iv) partnerships with external investors. Mackewicz & Partner (2003) assign these typologies to what they consider are appropriate forms of organization (e.g. business unit, joint fund, external VC unit, fund of fund), depending on the necessary degree of dependence on the parent company and the core goals of the CVC program. They emphasize the importance of the consistency between

goals and organizational structures and processes: “the goals and organization form must be aligned“ (Mackewicz & Partner 2003, p. 39). However, the authors do not specify which type of approach is likely to be the most successful. They only state that the experts they interviewed believe that independence from the corporate parent is the most important factor for a CVCs success. They therefore argue for legally independent CVC units, but they do not test this recommendation on the basis of their own dataset.

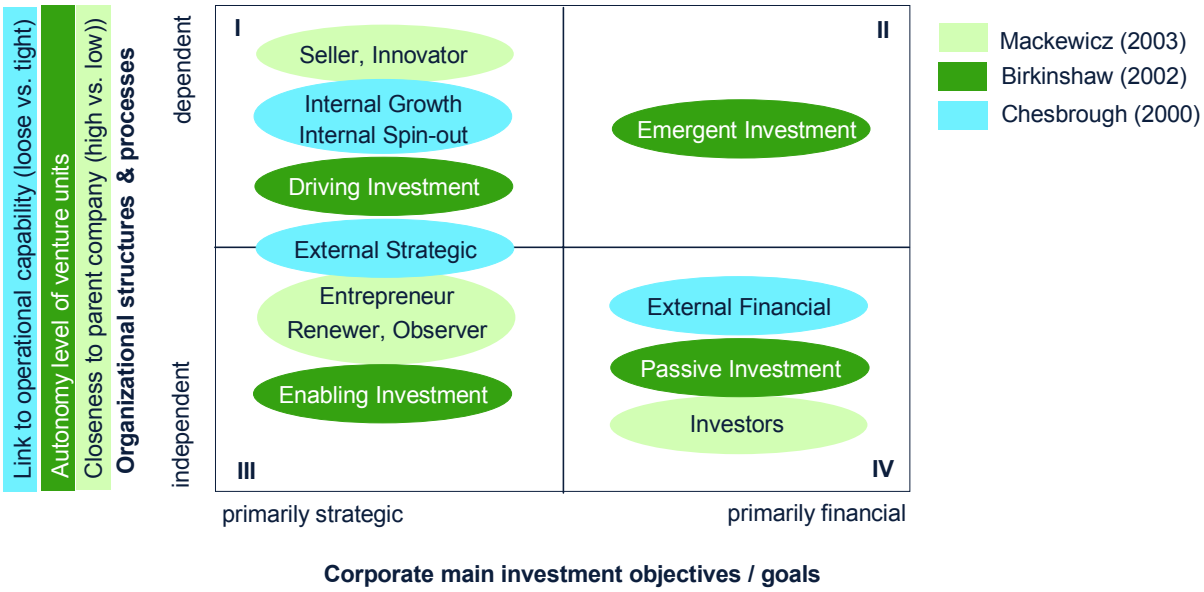
Birkinshaw et al. (2002) undertook an extensive international CVC survey.[1] They clustered the CVCs in four groups of venture units according to their overriding strategic investment objectives (p. 25): (1) The External Financials, who invest in external business opportunities primarily to deliver financial returns to the parent company, (2) The External Strategics, who invest in external business opportunities for strategic reasons, (3) The Internal Growths, who invest in internal investment opportunities for growth, and for other internal reasons, and (4) The Internal Spin Outs, who invest in internal investment opportunities as a means of leveraging intellectual property and spinning out businesses that do not fit. Among their main findings were that venture units have to be both independent and attached, but for very “young” venture units, “independence is more important than integration” (Birkinshaw et al. 2002, p. 34). Furthermore, they concluded that, “there is a clear (and significant) trend that equates greater independence in funding with superior performance” (Birkinshaw et al. 2002, p. 33). The authors do not make a consistent link between goals and structures and processes, although they do point in this direction. For example, they note that, “if the venture unit is attempting to develop strategic options for its parent company, it should – all else being equal – not create strong linkages to its business units“ (Birkinshaw et al. 2002, p. 33).

The three different kinds of categorizations presented in the literature are brought together and related to the categorization used in this paper as a basis for

[1] Most of the CVCs surveyed are located in North America (including Canada) and Europe.

generating a theory on CVC structure and strategy (see Figure 1). The horizontal axis in Figure 1 represents the overall corporate investment objectives (strategic vs. financial). This axis is identical with the dimension of Chesbrough (2002) and corresponds in kind with the dimension of Mackewicz & Partner (2003) ("kind of goal"). Birkinshaw et al. (2002) use a variety of dimensions to differentiate their four investment groups. One of their dimensions, "reason for establishing a venture unit" somewhat corresponds with our classification.

Figure 1: Comparison of CVC investment categories



The vertical axis represents the degree of (in-)dependence of the organizational structures and processes of the CVCs. This axis corresponds with the "link to operational capability"-dimension (loosely vs. tightly) of Chesbrough (2002), with the "closeness to the parent company"-dimension (high vs. low) introduced by Mackewicz & Partner (2003) as well as with the "autonomy level of venture unit" of Birkinshaw et al. (2002).

Birkinshaw et al.'s categorization into external and internal investment objectives is somewhat different. Of their four groups only the External Financial's seem to be comparable to our fourth as well as to Chesbrough's (2002) fourth category (Passive Investments). Birkinshaw et al.'s second, third and fourth group of

venture units mentioned above are all mainly strategically driven, and form therefore a kind of subgroup of mainly strategically oriented investments. Of the six Mackewicz typologies, the “Investors” correspond to our fourth category; the “Renewer”, “Entrepreneurs” and “Observer” can broadly be placed in our third category. Chesbrough’s (2002) four groups come closest to our four categories.

Propositions

Drawing the findings from the literature together, the following propositions can be investigated on the basis of our additional German data set. Doing so provides the opportunity to re-examine the somewhat contradictory findings in the existing literature in order to contribute to building a consistent theory.

Based on the findings of both Gompers and Lerner (1998), that CVC programs with a strong strategic focus – unlike those without – appear to be stable and the findings of Siegel et al. (1988), that CVCs focusing on financial goals achieve higher ROIs and are just as strategically successful as strategically oriented ones, our proposition is that a clear investment focus – either mainly financial or mainly strategic – will be more successful than an indifferent mixed investment approach. (The terminology, “primarily” financial or “primarily” strategic as opposed to “strictly” is used to point out that CVCs – unlike VCs – always need to have their natural “second” objective – strategic or financial respectively – in mind).

Proposition 1a: The clearer the focus of the CVCs is, the more financially and strategically successful the CVC program is likely to be.

Additionally, one observes the following: (i) the success rates of classical, experienced VCs, which only focus on financial goals, tend to be higher than those of CVCs, (ii) in the long run any investment can only be considered a strategic success if it is also financially tenable or successful; (iii) any unit within a corporate has to financially contribute to the profit of an organization to justify its existence in the long run. At the same time, CVC units are – one way or the other – bound by their corporate parent and hence have to take its interests and

strategic orientation into consideration. Therefore, we conclude that the primarily financial approach is overall – both financially and strategically – even more successful and promising than the primarily strategic approach.

Following Chandler's (1962) famous theory that structure follows strategy, the financial as well as the strategic goals have to be reflected in appropriate underlying organizational structures and processes of the CVC, which can then subsequently support the CVC's goals.

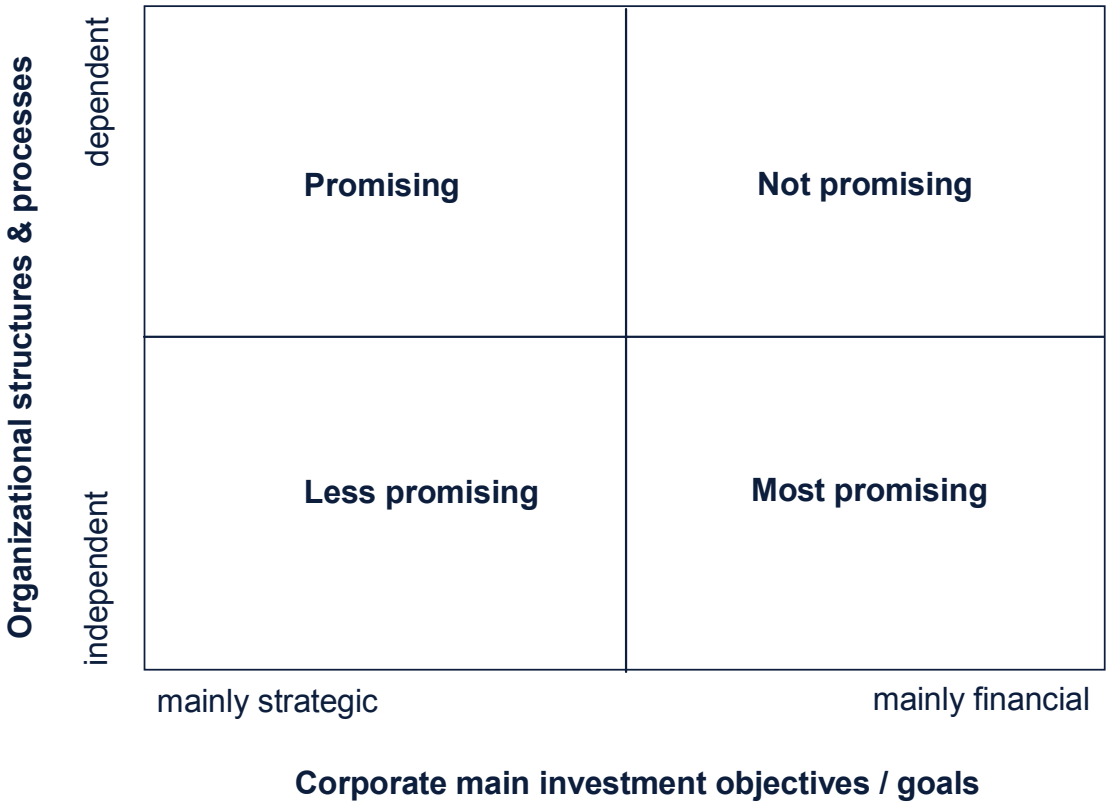
Proposition 1b: The more consistent the underlying organizational structures and processes with the stated goals, the more efficiently these goals can be pursued and reached.

Siegel et al. (1988) as well as Birkinshaw et al. (2002) found that organizationally independent CVCs were financially more successful than dependent ones. Birkinshaw et al. (2002) explained that "young" venture units need to "create distance between themselves and their parent companies, through a separate fund, a high level of decision-making autonomy, strong links to the VC community, and incentives based on carried interest and bonuses" (p. 4). Mackewicz & Partner (2003) also report that experts considered organizational independence to be most important for the success of CVCs, but their study neither tests nor proves this claim. It is possible to examine the claim's validity on the basis of our data by focusing on two characteristics used by Siegel at al. (1988) and Birkinshaw et al. (2002) to represent organizational (in)dependence: decision-making autonomy of the CVC unit and fund structure.

Proposition 2a: The greater a CVC's decision-making autonomy, the more successful the CVC unit will be.

Proposition 2b: The greater the parent company's financial commitment to its CVC unit the more successful the CVC unit is likely to be.

Figure 2: Potential of the four CVC investment categories



Summarising in a simple way which kind of CVCs are considered to have the highest potential and hence, are most likely to be successful in the long term, Figure 2 has been developed. It demonstrates that such CVCs, which have rather independent organisational structures and follow a mainly financial approach, are expected to have the highest potential for the reasons mentioned above. The least successful ones are expected to be those CVCs, which aim for financial goals while remaining dependent on their corporate mother. This is because these two goals are considered to be contradictory and hence, not achievable at the same time.

Methods

Sample and Design

The propositions are examined by using data from two waves of a comprehensive study we have conducted in Germany. In the first wave a standardized questionnaire was sent to all the CVCs operating in Germany in 2001 that had existed long enough to be able to report on their strategic and financial goal attainment. The sample of 34 CVCs included only those that had been founded in 2000 or earlier (the average founding year was 1997). Twenty of the companies responded, which represents a high return rate of 62.5% for a mailed questionnaire survey. The second wave of the study was a standardized follow-up telephone interview conducted in February 2002 with the CVCs that had participated in the first wave. One of the CVCs in the sample had left the market by the time the follow-up telephone interviews were conducted, so the data for the second wave is based on the remaining 19 organizations. Such a standardized approach essentially eliminates the interview bias and increases the quality of the data.

The validity and reliability of the data were verified in a number of ways. First, the five-page questionnaire was pre-tested with several investment managers in the first wave, and the same pre-testing was conducted in the second wave for the telephone interviews. The data from the two survey waves were combined. Because of the small number of cases, a highly quantitative statistical analysis of the dataset was inappropriate. Instead, other national and international studies were drawn upon and incorporated into the mainly descriptive statistical analysis. This comparative data put our results in perspective.

In order to be able to compare CVCs with the traditional independent VCs in Germany, the same questionnaire was also sent in 2001 to all the German VCs that focused on early stage financing. Out of the 216 such companies in Germany at the time, 68 returned a complete questionnaire (response rate of 31.5%). Some key characteristics of this sample were compared with the Statistics of the German Private Equity Association (BVK), which contain almost all German VCs. This was done to understand how this sample differs or represents the overall German market. It turned out that the 68 VCs of our sample have larger funds,

bigger portfolios and higher sums invested than the BVK average. This suggests that the respondents represent the bigger and probably more important VCs in the market, which was de facto the case.[2] The average founding year was 1995, hence, on average two years older than the CVCs

Measures

The following measures build on those we found in previous comparable research, including some we adopted from Siegel et al. (1988) and Schween (1996). Where necessary new measures were added to cover items not yet appropriately dealt with in the literature.

1. Significance of financial versus strategic goals: used as a measure of profit versus strategic orientation and ambitions of CVCs. We measured the significance of these two types of goals on a 5-point scale ranging from 1 (exclusively financial goals) to 5 (exclusively strategic goals), adopted from Schween (1996).
2. Value of investment criteria: used as a measure of profit versus strategically driven investment decisions of CVCs. The answers indicate which aspects are important when deciding to invest in potential portfolio companies. At the same time, they are used to control the previous question. A total of 29 criteria, scored on a 6-point scale ranging from 1 (no importance) to 6 (very important). Some of them are adopted from MacMillan et al. (1985), others from Schween (1996). The eight additional criteria focused specifically on corporate venture capitalists are mostly self-constructed and therefore have not been tested before.
3. Decision-making autonomy: used as an indicator for independency of the corporate venture capital unit. Independence is interpreted as delivering fact-based decisions based on objective criteria rather than on internal politics. We measured it with four categories adopted from Schween (1996) as well as self developed ones. Important decisions such as those

[2] For a detailed comparison of this sample with the BVK statistic, see Weber and

concerning investments are made (a) within the CVC unit and without the parent company, (b) in close consultation and in concert with the parent company, (c) within a committee in the parent company as proposed by the CVC unit, or (d) in accordance first with (a), thereafter (c), depending on the sum to be invested.

4. Financial commitment by the parent company: used as an indicator for long-term commitment to the asset class. Long-term commitment, which cannot easily be recalled from the headquarter (in an own fund), in turn provides independence for the venture capital unit. This is important in order to establish the unit as an independent, respected player in the market. We measured the financial commitment in two categories: (a) a clearly defined fund or freely accessible financial means providing for a relatively long period; (b) no clearly defined fund or no financial means providing for a relatively long period; instead, ad hoc decisions recorded as an outflow on the balance sheet.
5. Strategic success or attainment of strategic goals: used as a measure of strategic performance/success. Strategic success is very individual and hence rather difficult to measure with objective criteria (Mackewicz & Partner 2003). The measurement is based on Schween's 5-point scale of satisfaction (1996). This 5-point scale ranges from 1 (not at all attained) to 5 (completely attained). This scale was enlarged by a sixth category "too early to tell" due to the youth of the CVC units and lack of exits in the portfolio. Two arithmetic means were calculated as an additional measure of this variable to make them comparable to two other datasets (Schween 1996 and Siegel et al. 1988).
6. Financial success or attainment of financial goals: used as a measure of financial performance/success. It is measured quantitatively to make it as objective and comparable as possible. The CVC's internal rate of return (IRR) was examined with a 5-point scale ranging from an IRR smaller than 0% to an IRR of above 30%. This scale was enlarged by a sixth category

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Dierkes (2002).

"too early to tell" due to the youth of the CVC units and lack of exits in the portfolio. Unfortunately, exactly comparable data for the German VCs or the US CVCs do not exist. An arithmetic mean was calculated to approximately compare the findings to those of Schween (1996) as well as Siegel et al. (1988).

Methodology

The 20 CVCs analyzed in the first wave of the study included all major players in the German market. We compared our dataset with the data of a recent survey of Mackewicz & Partner (2003) who surveyed 31 German CVCs, which constitutes almost all German CVCs. The comparison demonstrates that our dataset sufficiently represents the German CVC market. With 80 million Euro per CVC, the average fund invested by CVCs in our dataset is similar to the data from Mackewicz & Partner (2003) with 77 million Euro.[3] Mackewicz & Partner (2003) report an average of 24 portfolio companies per CVC while our dataset states 19 portfolio companies per CVC. These figures are skewed by the very large number of investments made by a few companies. The median score, which is perhaps a better indication of the norm, suggests that our typical CVC has invested 13 million Euro and has 9 companies in its portfolio. This is due to the fact that the German CVC market includes several CVCs that have only up to three companies in the portfolio. Unfortunately, no comparative data on medias was available.

Limitations of our study arise from two facts. First, the CVC market in Germany is still comparatively young. Second, the slump that hit the so-called "Neuer Markt" (German stock exchange for young technology companies) in 2001 has considerably reduced the existing perspectives of VCs. These two circumstances meant that some of the interviewees could not yet answer questions about their strategic and their financial success. These participants in the study had not been

[3] Reliable information on fund volume in both cases was difficult to attain as most CVCs do not operate out of a clearly determined funds.

in the market long enough and/or market conditions had not allowed them to exit any investments.

Results

The results of the two waves of data collection on German CVCs, as well as the new data generated in this study about German VCs, are presented here in such a way as to allow them to be compared with the findings of other studies about German and American CVCs. The first part of the comparison relates to investment facts (volume, stage, industry, geography) to get an understanding of the German venture market as such. It compares our German CVC data with our German VC data. The second part turns to organizational, structural and strategic aspects of the CVC market to help answer our questions regarding the CVCs' goals, structures and performance. The new German results are again compared with the findings of one international as well as other German, and American studies, where possible.

Investment Facts

Fund volume

Only 25% of the surveyed CVCs invest out of a clearly defined, limited fund. For the classical VCs, this is twice as high with 52%. Having said that, it is rather difficult to provide exact amounts regarding the CVCs' fund volume since there is no defined fund in most cases. Those 5 CVCs that do have a defined fund size, state on average a fund volume of 143 million Euro. Due to the small sample, this number is not representative. The average fund volume of classical VCs is twice as high with 255 million Euro.

Number of portfolio companies

The surveyed CVCs have an average of 19 companies in their portfolio and a median score of 9 companies. This is more or less comparable to the classical VCs, which have 22 portfolio companies on average and a median of 10.5.

Investment focus – by sector

The results indicate that 50% of all CVC investments are undertaken in three investment sectors (see Table 1). The IT-Software sector ranges first, with 23% of the investments followed by communication technology, with 17% invested capital. Third comes biotechnology/chemistry with 10%. Compared to the VCs, similarities and differences become apparent (see Table 1). CVCs are about three times more engaged in Multimedia/Internet than VCs. They are significantly less invested in sectors like medical equipment/ diagnostics as well as engineering/materials.

Table 1: Investment by sector – comparison by VC-types

		Corporate VCs *in % (n = 20)*	***Classical VCs*** *in %(n = 52)*
1. Sector			
	IT-Hardware	5	7
	Communication technology	17	18
	IT-Hardware	5	7
	IT-Software	23	24
	Medical Equipment/Diagnostics	1	7
	Biotechnology/Chemistry	10	13
	Engineering/Materials	1	7
	Consumer goods	0	2
	Trade/E-Commerce	6	5
	Financial Services/Other Services	4	3
	Multimedia/Internet	14	4
	Energy/Environment	2	1
	Other Sectors	2	2
2. Company Stages			
	Seed-Stage	35	25
	Start-up-Stage	30	38
	Expansion/Early Stage	28	30
	Other stages	0	6
	n.a.	7	1
3. Regions			
	Germany	69	76
	Other Europe	9	12
	Outside Europe	21	11

Investments focus – by company stage

Our study included only VCs that focus on early stage investments. These VCs invest about 90% of their current fund in one of the first three investment stages: seed, start-up, early and expansion stage (see Table 1). Only 6% of the VCs indicate to also invest in other stages like second round, later stage or bridge financing; CVCs even state 0%.

CVCs put priority on seed investments with an average of 35% invested capital. Classical VCs invest only 25% in seed stages. For them, start-up investments seem to be most important with 38% of their capital allocated there (only 30% for CVCs). Both put similar emphasis on expansion/early stage (CVCs: 28%, classical VCs 30%).

Investments focus – by region

Both VC groups have a clear national focus. CVCs invested 69% and classical VCs 76% of their capital in Germany (see Table 1). The remainder was invested within Europe 9% (12% respectively) and outside Europe 21% (11% respectively).

Organizational, structural and strategic aspects

The second part of this study inquires into organizational, structural and strategic aspects of the German CVC market. Information on selected characteristics was gathered: strategic goals, investment criteria, fund structure, decision-making autonomy, and attainment of strategic and financial goals (performance).

Strategic and financial goals

Of the 19 CVCs surveyed, 42% stated that they primarily pursued strategic goals; 21%, primarily financial goals. Strategic and financial goals were pursued equally by 37% of the CVCs (see Table 2).

Table 2: Goals of Corporate Venture Capital organizations

Goals	Schween (1996) (in %)	Weber / Weber (2002) in (%)	Mackewicz & Partner (2003) in (%)
Exclusively strategic	25	-	15
Primarily strategic	58	42	33
Strategic and financial	17	37	21
Primarily financial	0	21	27
Exclusively financial	0	0	3
Total	100	100	99

The findings of our new German study differ quite markedly from those of Schween (1996), who found that 10 of the 12 companies (83%) stressed strategic goals, with two companies (17%) stating that they pursued strategic and financial goals simultaneously. Mackewicz & Partner (2003) reported that 48% pursued strategic goals "primarily or exclusively", and 30% focused on financial goals "primarily or exclusively". Unfortunately, neither Siegel et al. (1988) nor Birkinshaw et al. (2002) posed the question this way. Therefore, the new German data can be compared directly only to other German CVC studies.

Nevertheless, indirect comparisons with the international data are possible. Siegel et al. (1988) asked a somewhat similar question, which lets them conclude that the objective considered most important by CVCs is return on investment (mean 3.38).[4] Of the objectives related to strategic benefits, the most important was exposure to new technologies and markets (mean 3.12). Birkinshaw et al. (2002) explored seven distinct reasons for establishing a venture unit. On a scale from 1 to 5, the most important reason was "to learn from and develop strategic relationships with portfolio companies" (3.6), and second most important was "to increase demand for our products and services" (2.7). Both are clearly strategic

[4] However, Siegel et a. (1988) note: "the high standard deviation for this objective indicates that there is not high consensus as to the importance of this objective. In fact, nearly 42% of the respondents listed return on investment as less than essential" (p. 235).

goals. The reason to invest in external start-ups for financial returns rated lower (2.3)[5].

Investment criteria

The CVCs in our survey ranked "product's uniqueness and degree of innovation" as the most important investment criterion (mean: 5.4 on a scale from 1 to 6). The German VCs we studied ranked this criterion equally high but at the same level with "expected return" and "industry experience". "Management's ability to attract highly qualified employees" was ranked second (5.3) by the CVCs. The "expected return" was ranked a close third along with "industry experience" and the management team's "quality of leadership" (5.2) (see Table 3).

In contrast, the ranking of the U.S. study from 1988 by Siegel et al. differs substantially from ours. This might partially be due to different criteria being questioned, which makes a comparison of the results difficult. It is interesting to note that in Siegel et al. (1988), a management related criterion "entrepreneur's capability of sustained effort" ranked first while it is a product related one for Weber and Dierkes (2002). Siegel et al. (1988) rank "industry experience" second and "ability to evaluate and react well to risk" third. Financial criteria ranked ninth. Schween's study (1996) also showed that the CVCs put less emphasis on financial criteria, ranking them only in seventh place. Most important at that time were "potential size and growth of the market" (4.6) along with "ability to evaluate and react well to risk" (4.6).

[5] The low rating of this answer could be surprising. We believe it is due to the fact that Birkinshaw et al. (2002) formulated their question in such a narrow way: „investment in independent start-ups / external business ideas purely (italic emphasis by the authors) as financial investments" (p. 15), and hence, consider it comprehensible.

Table 3: Investment criteria of CVCs and independent VCs

Investment criteria (by average level of significance)	Weber/ Weber (2002) [a]	Weber/ Weber (2002) [a]	Schween (1996) [b]	Siegel et al. (1988) [c]
	CVCs (*n* = 20)	VCs (*n* = 52)	VCs (*n* = 12)	CVCs (*n* = 52)
Product's uniqueness or innovativeness	1 (5.4)	1 (5.4)	3 (4.0)	7
Management's ability to attract and retain highly qualified employees	2 (5.3)	3 (5.0)	-	13
Expected return at point of exit; 10-fold increase in investment in 5 to 10 years	3 (5.2)	1 (5.4)	7 (2.6)	9
Industry experience; management team's knowledge of the market	3 (5.2)	1 (5.4)	2 (4.2)	2
Quality of management team's leadership	3 (5.2)	2 (5.1)	3 (4.0)	6
Completeness of the management team	4 (5.1)	6 (4.7)	-	-
Potential, size, and growth of the market	5 (5.0)	5 (4.8)	1 (4.6)	5
Ability to evaluate and react well to risk	-		1 (4.6)	3
Management team with whom the "chemistry is right"/Personality compatible with mine	6 (4.9)	3 (5.0)	-	22
Management's ability to communicate	6 (4.9)	4 (4.9)	4 (3.8)	8
Demonstrable acceptance of the product in the market	6 (4.9)	5 (4.8)	2 (4.2)	19
Management team's complementarities	6 (4.9)	5 (4.8)	3 (4.0)	-
Entrepreneur's capability of sustained effort	-	-	3 (4.0)	1
Ability to take criticism	-	-	3 (4.0)	15
Thoroughly familiar with the product	-	-	4 (3.8)	4
Ability to build, convey, or retain an image of the corporation as an innovator [d]	7 (4.5)	-	-	-
Reputation of the portfolio company's partners or customers	8 (4.4)	10 (4.0)	-	-
Management's experience with new ventures	9 (4.3)	10 (4.0)	-	-
Track record relevant to the venture	-	-	-	10
Potential strategic business partners or alliances for the corporate mother [d]	9 (4.3)	-	2 (4.2)	-
Expected time until product is ready for the market; prototype exists	10 (4.2)	7 (4.5)	7 (2.4)	14
Patent protection of the products	11 (4.0)	8 (4.4)	5 (3.6)	-
Potential pool of ideas for the parent company [d]	11 (4,0)	-	-	-
Current valuation	12 (3.9)	8 (4.4)	-	-
Important market for the parent company [d]	-		4 (3.8)	11
Same market as that of the parent company [d]	-		6 (3.0)	
No expectation of relevant competition in first 3 years	17 (2.9)	13 (3.2)	5 (3.6)	18

Note: The numbers in this table indicate the ranking of the criteria.

a) Average values on a scale ranging from 1 (*unimportant*) to 6 (*very important*).
b) Average values on a scale ranging from 1 (unimportant to 5 (very important)
c) Average values on a scale ranging from 1 (*irrelevant*) to 4 (*essential*).
d) Refers only to CVCs.

Fund structure

Fully 63% of the CVCs surveyed had their own fund or freely accessible financial means providing for a relatively long period; 37% stated that they did not invest from a defined fund.

Siegel et al. (1988) divided their answers into three categories. 48% of the CVCs in their study explained that a separate pool of funds is specifically earmarked for venture capital investment on a onetime basis, another 27% invested out of a separate pool of funds, which is specifically earmarked for VC investments on a periodic basis. Of the CVCs surveyed 19% fund their deals on an ad hoc basis. The first two categories correspond more or less to our first category and are hence partially comparable. If one considers this to be a valid comparison, there is a higher percentage (75%) of CVCs with a relatively independent money source in the US than in Germany.

In the international study by Birkinshaw et al. (2002), 58% CVC units have either a closed fund established solely by the parent company or a separate pot of money set aside for corporate venturing. In 35% of the cases, the money is provided on the basis of internal review – meaning that investments have to pass a review committee (Birkinshaw et al. 2002, p. 14). These figures are relatively similar to ours.

Decision-making autonomy

In only 16% of the organizations in our German sample were investment decisions made within the CVC unit independently of the parent company, or independently but only up to a certain deal size; 16% decided jointly in close consultation with the parent company. The remaining 68% of the surveyed CVCs made suggestions to the parent company, which then took the decisions alone.

Again, the precise formulations of the questions differed between the studies, but nevertheless a comparison seems to be meaningful. Similar to the German results, Siegel et al.'s study (1988) found that the majority of the CVCs surveyed were given little autonomy to select which ventures should be funded. Fewer of

the American venture professionals (51%) than Germans (68%) indicated that formal approval from corporate management was required for all deals. Fifteen percent of the CVCs in the U.S. sample required approval for deals over a designated size. Only 11% did not need any approval from the corporate parent but could decide entirely independently. In Germany, only one of the CVCs is given such independence.

Birkinshaw et al. (2002) also found that large investment decisions had a strong parent-company influence. Even on small investments "the norm is for the corporate venture unit's decisions to be ratified by or made in consultation with the parent company" (p. 16). This suggests that in the countries they investigated the situation of decision-making autonomy is similar to Germany.

Attainment of strategic goals

Responses related to performance must be reviewed with care, given the self-report nature of this study and the subjectivity involved in rating one's own performance. A total of 58% of the German CVCs stated that they had "completely" or "largely" attained their strategic goals; 37% reported that their goals had been only "partially" or "largely unattained". None responded that strategic goals were "not at all attained". A total of 5% of the CVCs explained that their CVC unit was not yet long enough in business in order to draw such conclusions (see Table 4).

Table 4: Attainment of strategic goals

Reported level of attainment	Companies in the sample (%)
Completely attained	21
Largely attained	37
Partially attained	32
Largely unattained	5
Not at all attained	0
Still too early to tell	5
Total	100

Converting these values into an arithmetic mean (scored on a scale from 1 [not at all attained] to 5 [completely attained])[6] to make them comparable to the data of Schween (1996) one arrives at an arithmetic mean of 2.78. Schween (1996) found an arithmetic mean of 2.0 for "overall satisfaction with the attainment of strategic goals" (p. 189).

For 21% of the German CVCs, attainment of strategic goals consisted in their CVC activities having helped them develop new strategic fields of business. The remaining 79% of the CVCs did not report such success. According to 84% of the surveyed CVCs, their activities had strengthened existing areas of the parent company's business, especially via know-how-transfer (88%) as well as via partnerships and/or cooperative arrangements between business units of the corporate parent and the venture (56%) (Weber and Weber 2002).

It is difficult to compare the new German findings with those published by Siegel et al. (1988) for three reasons: (i) they surveyed different goals (called objectives) which can be categorized into strategic and financial goals; (ii) they did not examine the degree of goal attainment, but rather the general level of satisfaction relative to the CVCs' objectives, which is even more subjective; and (iii) they used a different scale, which is not comparable with the one calculated above, because it ranges from 1 [unsatisfactory] to 4 [outstanding]. We therefore calculated a second mean from our dataset, which happened to be the same mean of 2.78, to obtain an approximate value, making it somewhat comparable to Siegel et al. as well. The objective with which the U.S. CVCs were most satisfied was "exposure to new technologies and markets" with a mean of 2.8, followed by "return on investment" (mean of 2.47). Also the objectives "opportunities to manufacture and market new products" and "acquisition candidates" were more than satisfactory (mean of 2.41 and 2.30). The only objective that was assessed to be less than satisfactory was "opportunity to improve manufacturing processes" (mean of 1.75). A comparison of these results with our data suggests that the level of

[6] The category "still too early to tell" was not included in the arithmetic mean.

attainment/satisfaction in the U.S. companies tends to be slightly lower than our German second mean of 2.78.

Attainment of financial goals

Just under half (47%) of the CVCs in the study claimed to have an IRR above zero and hence at least somewhat attained their financial goals, 21% were not successful (see Table 5). Again, due to the youth of the German CVC market, about one third (32%) reported that it was still too early for them to tell and that no exits had occurred yet. Converting these values into an arithmetic mean comparable to Schween (1996) and Siegel et al. (1988) (scored on a scale from 1 [not at all attained] to 5 [completely attained])[7], one arrives at 2.45. This result is almost exactly the same as the mean financial goal attainment of 2.47 reported by Siegel et al. (1988). The arithmetic mean reported by Schween (1996) was 1.9, which is significantly lower.

Table 5: Attainment of financial goals

IRR [a] (in percentages)		Companies in the sample (%)
> 30	Completely attained	0
21–30	Largely attained	21
11–20	Attained	10
0–10	Largely not attained	16
< 0	Not at all attained	21
< 0	"Too early to tell" or "no exits yet"	32
Total		100

a) Internal rate of return, an expression of the level of attainment

[7] The category "still too early to tell" was not included in the arithmetic mean.

Proposition Examination

Having presented and compared the investment statistics as well as the results on organizational, structural and strategic aspects with other national and international datasets, we can now turn to examining our propositions.

Proposition 1a: The clearer the focus of the CVC is, the more financially and strategically successful the CVC program is likely to be.

Only 25% of the CVCs that pursued strategic goals "primarily or exclusively" reported that they had attained their financial goals. Forty-three percent of the CVCs with a mixed approach pursuing financial and strategic goals equally. All the CVCs that had pursued primarily financial goals stated that they had attained their financial goals. Of the CVCs with primarily or exclusively strategic goals, 63% largely or completely attained them. Among the CVCs that pursued primarily financial goals, 75% attained their strategic goals. Only 29% of the CVCs with a mixed approach reported that they had attained their strategic goals. These results support our proposition that those CVCs with a largely financial approach are by far the most successful. The mixed approach is financially more successful than the primarily or exclusively strategic approach. Concerning the strategic goal attainment our proposition is supported.

Proposition 1b: The more consistent the underlying organizational structures and processes with the stated goals, the more efficiently these goals can be pursued and reached.

Five of the 19 CVCs surveyed pursued primarily financial goals, six gave equal weight to financial and strategic goals, eight stressed primarily strategic ones (see Table 6). Of those five pursuing financial goals, only two indicated that they had access to a clearly defined fund or freely accessible financial means providing for a relatively long period. Only one of these five took investment decisions by itself without the corporate mother, but only up to a certain amount. Of the six CVCs that pursued financial and strategic goals equally, five indicated that they have an

independent fund of their own, one took investment decisions entirely independently, and one up to a certain amount. Of those eight CVCs that primarily pursue strategic goals, three quarters had access to an independent fund, but none of them was able to make investment decisions without the corporate parent. These results do not allow a clear conclusion to be drawn about our proposition.

Table 6: Goals, organizational structures/process, and goal attainment

	GOALS	STRUCTURES AND PROCESSES		PERFORMANCE	
		Own fund?	Who decides?	IRR	Attainment of strategic goals?
1	financial	no	gremium in corp. mother	21-30%	completely
2	financial	yes	gremium in corp. mother	21-30%	largely
3	financial	yes	CVC unit – up to a certain amount	11-20%	largely
4	financial	no	gremium in corp. mother	11-20%	partially
5	financial	no	in agreement with corp. mother	0-10%	partially
6	strat=fin	no	gremium in corp. mother	21-30%	completely
7	strat=fin	yes	VC without corp. mother	0-10%	largely
8	strat=fin	yes	gremium in corp. mother	<0%	partially
9	strat=fin	yes	gremium in corp. mother	no exits	partially
10	strat=fin	yes	CVC unit – up to a certain amount	no exits	too young/tendency positive
11	strat=fin	yes	gremium in corp. mother	no exits	too young/tendency positive
12	strategic	yes	gremium in corp. mother	21-30%	partially
13	strategic	yes	gremium in corp. mother	<0%	largely
14	strategic	no	gremium in corp. mother	0-10%	partially
15	strategic	yes	in agreement with corp. mother	<0%	completely
16	strategic	yes	gremium in corp. mother	<0%	largely NOT
17	strategic	yes	in agreement with corp. mother	no exits	largely
18	strategic	yes	gremium in corp. mother	no exits	largely
19	strategic	no	gremium in corp. mother	no exits	largely

Proposition 2a: The greater a CVC's decision-making autonomy, the more successful the CVC unit will be.

Of the three CVCs that made their investment decisions – at least up to a certain deal size – independently of the parent company, two stated that they were financially successful and that they had largely or completely attained their strategic goals (see Table 6). Among the CVCs that did not make their investment decisions on their own and instead submitted proposals to the parent company, only 44% reported that they were financially successful and 50% were strategically successful. These findings seem to support our proposition.

Proposition 2b: The greater the parent company's financial commitment to its CVC unit the more successful the CVC unit will be.

Of the CVCs that had their own funds or freely accessible money, 62% responded that they had largely or completely attained their strategic goals. The CVCs that had no fund or freely accessible money of their own reported nearly as frequently that they had attained their strategic goals (50%) (see Table 6). As for the attainment of financial goals, this second group did much better than the first, with 83% stating that they were financially successful as opposed to 31% of the CVCs that had a fund of their own. Surprisingly, these observations do not support our proposition but suggest the opposite to be true.

Discussion

The new German survey of CVCs gathered comprehensive data on goals, investment criteria, decision-making autonomy, fund structure, and goal attainment for the first time in six years. This update was urgently needed because the CVC market in the period under study has nearly tripled in size, though the number of such organizations is still miniscule compared to that in the United States (approximately 300). The comparison of our CVC results to our own German VC data (see also Weber and Dierkes 2002), to other German CVC studies like Schween (1996) and Mackewicz & Partner (2003), to the information reported by

Siegel et al. (1988) for the U.S. CVC market, as well as to international data from Birkinshaw et al. (2002) provides a better understanding of the German CVC market. This comparison covers the first aspect of this paper as lined out in the introduction.

The question is: How successful are the CVCs and what are potential factors influencing their success? By analyzing the CVCs' strategic and financial goals as well as their goal attainment in more detail, we aim to contribute to the development of a theory as to which overall strategy and which underlying structural approach might be the most promising.

A comparison of our data with those generated in Germany several years earlier by Schween (1996) allowed us to understand whether the German CVCs have changed the priorities of their goals and investment criteria over time and, above all, whether they are operating more successfully today than they were six years ago[8]. In order to examine the CVCs' successes and their influencing factors, we compare our German data with the international study by Mackewicz & Partner (2003) to see where significant similarities or differences emerge between the CVCs in Germany and abroad.

1. Strategic and financial goals

   Since 1996, the priority has clearly shifted from strategic to financial goals. In 1996, 83% of the surveyed CVCs still stated that they were pursuing exclusively or primarily strategic goals, whereas today that figure stands at 42% in our dataset and at 48% in Mackewicz and Partner's (2003) dataset (see Table 2). The remaining 17% of the CVCs in the 1996 survey stated that they pursuit a mixed approach of strategic and financial goals. In our dataset this figure stands at 37% and at 21% in Mackewicz and Partner's (2003) dataset. It seems especially noteworthy that 21% of the surveyed CVCs in our study and even 27% of the CVCs in Mackewicz' study stated

[8] This comparison is not based on a panel. It is a comparison between aggregate data based on different samples.

that they were pursuing primarily financial goals (+ 3% of those CVCs who exclusively pursue financial goals). There were no such responses in 1996. These results suggest that the investment priorities of CVCs are converging with those of the classical independent German VCs (Weber and Dierkes 2002). If one assumes that the financial contribution of a CVC unit within a corporation is essential to justify its existence and to make it sustainable, a shift towards financial rather than strategic orientation seems to be advisable.

2. Investment criteria

   A look at the most important investment criteria highlights the shift to emphasizing financial goals over strategic ones. Financial criteria were still more or less neglected in 1988 (US) and 1996 (Germany), whereas they have become one of the three most important criteria today (see Table 3) – about on par with the priority they receive among the classical independent VCs in Germany (Weber and Dierkes 2002). This means the CVCs in Germany have undergone a change process in the last six years regarding both their goals (see above) as well as their investment criteria.

3. Attainment of strategic goals

   Attainment of strategic goals has definitely improved over the past six years. Whereas 17% of the surveyed CVCs in 1996 stated that they had largely or completely attained their strategic goals, this figure stands at 58% in 2002. The arithmetic mean for the attainment of strategic goals has risen within the past six years from 2.0 (Schween 1996) to 2.78 in our study. It might be explained by the shift in goals and investment criteria from a more strategic orientation towards a primarily financial approach. This in turn could be interpreted as a learning process. Learning as an explanation of these observations sounds plausible since in 1996, the German CVC market was still in its infancy and one would expect some kind of learning curve. This seems particularly likely given the high percentage of investment managers in the CVC units who came out of the corporation with little or no VC investment experience (Weber and Dierkes 2002). The high percentage of CVCs pursuing a mixed strategy (37%)

might be explained as being not yet that far advanced, in other words: they are on their way on the learning curve from a strategic to a financial approach. It could alternatively simply be due to our small dataset.

4. Attainment of financial goals

   The CVCs have also greatly improved in the attainment of their financial goals in the past years. In 1996 only 17% of the surveyed CVCs stated that they had attained their financial goals, whereas in 2002 just under half (47%) claimed to have done so (see Table 5). The arithmetic mean reported by Schween (1996) was 1.9; today's mean is 2.45. It is striking that only 25% of the strategy-oriented CVCs have achieved their financial goals, whereas 100% of the financially oriented CVCs do so. The increased attainment of financial goals can partially be attributed to the changes in the CVCs' goal structure towards financial goals. This development can equally be interpreted as part of a learning process. The CVCs are likely to have learned from the more established and experienced independent VCs and to have been able to transfer their knowledge and adopt their learning to the specific needs of the respective corporate environment.

We can thus answer the second question raised in the introduction by saying that CVCs emphasizing primarily financial or primarily strategic goals seem to be more successful than those following a mixed approach. Maybe this result indicates that it is extremely difficult to sensibly structure and manage a program with two, sometimes conflicting, goals. Intuitively, it makes sense that a financially driven CVC that follows market incentives cannot at the same time fully pursue the strategic preferences of the corporate. A portfolio company that does not generate a return on investment in the medium term but represents a high strategic value in the long run would be an example of such a goal conflict.

The results further indicate that the primarily financial approach seems to be financially and strategically more successful than the primarily strategic approach (see Table 6). Our results therefore confirm the conclusions drawn by Siegel et al. (1988) that an approach that primarily takes financial goals into consideration,

tends to be the most successful, both strategically and financially. The observations by Gompers and Lerner (1998) are partially challenged, at least for the German CVCs.

Despite these findings, the unclear results regarding the consistency argument seem to indicate that "the one best strategy" does not exist. Instead, holistic solutions are required which are consistent with the individual circumstances of the CVC. In other words, even though the financial approach generally seems to be more successful, there might be CVCs with internal or external conditions for which other approaches fit better. The success of the venture therefore depends very much on how it is structured and organized. A CVC program with primarily financial goals has to be set up and run differently than one with primarily strategic goals.

Hence, the answer to the third and fourth research question as to whether and how the organizational structures and processes might additionally influence the success of the CVC and whether these underlying organizational structures and processes should be consistent with the main investment goals remains less obvious and therefore more difficult to answer.

5. Organizational structures/processes

   a) Structures/processes and success

   Birkinshaw et al. (2002), Witt and Brachtendorf (2002), and Mackewicz & Partner (2003) found that a CVC's organizational independence is particularly important for financial and strategic success. We explored this relationship with our data ex post as our survey was already completed when their surveys went out and their results were published. The empirical evidence that more independent CVCs are more successful is partially supported by our German data. However, the sample is not only small but in this dimension also very unbalanced. The 16 CVCs (84%) with relatively little decision-making autonomy are financially as well as strategically less successful compared to the 3 CVCs with more decision-making autonomy (see Table 6 and proposition 2a). The 13 CVCs (68%) that reported having their own fund or freely accessible money are strategically comparably

successful but – contrary to our expectations – financially significantly less successful. Hence, only the finding that a high level of decision-making autonomy – as an indicator for independence – is a critical success factor for the corporate venture unit can be supported.

German CVCs tend to be more dependent on their corporate mother than their U.S. counterparts are, even 14 years later (the time difference of the two studies). This is reflected in fewer funds on their own (63% vs. 75% US) and in less investment decision-making autonomy. The question arises as to why this is the case, given that the recommendations generated over the years by theoretical and empirical research point in the direction of giving greater autonomy in order to maximize success. One might conclude that (i) the German situation is nevertheless a conscious practice as CVCs believe they will be more successful by pursuing this way (ii) the corporations might want to change the situation, but are still too deeply entrenched in the system and the underlying German culture of these structures. Another reason may be (iii) that the corporate structures and internal politics make it difficult to introduce a market oriented incentive scheme for venture units that would allow for an appropriate alignment of goals and structures. It is not possible to provide a comprehensive and satisfactory answer at this stage. Further empirical research on this point is necessary to validate this proposition for Germany on the basis of a larger dataset.

b) Structures and processes and consistency with underlying goals

The final aspect lies in determining the link between corporate investment goals, organizational structures and processes, and success. This seems rather difficult. The new German data and comparison with the other existing studies shows (i) that the CVCs that decide independently all have their own fund, and (ii) that in all the CVCs with primarily strategic goals decision making is done in close connection with the corporate parent. This seems to support our proposition 1b as both examples demonstrate consistency between goals and structures. The goals are hence expected to be pursued more efficiently. At the same time, however, 11 of the 14

CVCs that pursue an either primarily strategic or a mixed approach also report having their own fund. This does not indicate consistent structures and seems therefore not in line with our proposition 1b, nor does it fit with Mackewicz & Partner's findings (2003) that a strategic orientation requires a relatively close integration with the corporate parent[9].

Unfortunately on the basis of our data, we could not specify the most promising investment-organization-types. More research will be needed on larger samples to establish whether we (and Mackewicz & Partner) are correct in believing that a segmentation of CVCs in different investment-organization-types is needed, in which each segment forms a holistic entity between goals, structures and processes. A larger sample would also allow to more accurately specify such a segmentation.

This study makes three contributions to the literature on CVC and has several implications for future research. This paper provides an extensive picture of CVC programs and the way they are managed up to date. It was the first empirically grounded analysis of CVCs since 1996, the point at which the CVC market in Germany began to gain any significance at all. It is therefore able to describe the recent developments in the German CVC practice in depth and to provide a comparison of German practice with the one in the United States in terms of some key characteristics and developments.

Second, by questioning the priority that CVCs have thus far placed on the pursuit of strategic goals, or a mix of both strategic and financial goals, this investigation suggests that (i) mixed strategies are not as successful as focused strategies on either financial or strategic aspects; (ii) an emphasis on primarily financial goals seems to be more successful than on primarily strategic goals.

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[9] Birkinshaw et al. (2002) came to an observation that they called "counterintuitive". They found a strong negative correlation between the extent to which the venture unit actively seeks out linkages with the business units in the parent company and performance. They conclude therefore: "if the venture unit is attempting to develop strategic options for its parent company, it should – all else being equal – not create strong linkages to its business units" (p. 33).

Third, Chandler's (1962) theory that structure follows strategy seems to also hold for CVC programs. Hence, the consistency of a CVC's underlying structures and processes with the goals tends to be essential for a CVC's ability to attain its goals and might be a promising path to pursue further. While our results are unfortunately not clear on this point, it suggests that a more holistic approach is required when setting up, structuring and managing a CVC unit, keeping in mind the strategy and structure of the corporate organization. Significantly, programs with financial objectives have to be managed differently from programs with strategic ones. Particularly the last point contributes to the development of a more refined theory of best practice for the set-up and integration of a CVC unit into its corporate parent. However, in order to eventually build a valid theory out of these and previous findings, the propositions outlined above need further specification and verification on the basis of a larger dataset.

For future research, it would be intriguing to have the present work become a longitudinal study. It would then be possible to follow the goals, structures, processes, and success of the CVC market in general and of individual organizations in particular. Such a longitudinal study should also continue to compare CVCs and classical VCs in order to gain further insight about which strategies work best and why.

Research on the interface between the parent company and the CVC unit as a facilitator between the parent company and the portfolio company could provide further insight on additional success factors. For instance, structuring all inter- and intra-organizational processes of the involved units – like communication, and compensation practices – strictly in line with the primary goals of the parties involved could enhance the competitive advantage of the parent company through innovative ideas of portfolio companies. It could increase the success of the portfolio company by benefiting from the vast resources and knowledge of the parent. This would ultimately lead to the CVC's success and support its acceptance in the organization.

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